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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,299	07/28/2003	Duane E. Norby	4695-00084	3485

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EXAMINER

DUONG, THANH P

ART UNIT PAPER NUMBER

1764

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/628,299

Applicant(s)

NORBY ET AL.

Examiner

Tom P. Duong

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicants' remarks and amendments filed on February 3, 2006 have been carefully considered. Claims 6-7 and 14 have been amended. Claims 16 and 17 have been withdrawn from consideration. Claims 1-22 are pending in this application.

### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-5 and 18-22 in the reply filed on February 3, 2006 is acknowledged. The traversal is on the ground(s) that the application may be most efficiently examined if all groups were examined at one time. This is not found persuasive because the apparatus as claimed can be used to treat industrial waste gas such as boiler other than the diesel exhaust gas and the inventions are distinct which required a separate status in the art as shown by different classification.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 4, and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sewell, Sr. (4,149,862).

Sewell, Sr. '862 discloses an exhaust treatment device comprising an inlet cylindrical body (14), a central cylindrical body (12), outlet cylindrical body (16), said inlet cylindrical body mating with the central cylindrical body at a first junction (30), said central cylindrical body mating with the outlet cylindrical body at a second junction (46); and each of the junctions appears to have an outer profile of increased outer diameter being less than 2%. Alternatively, it would have been obvious in view of the device of Sewell, Sr. to one having ordinary skill in the art that the increased in the outer diameter at each of the junctions (14, 16) depends on the dimensional design requirement for the filter casing (10).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Sewell, Sr. '862. Sewell, Sr. '862 discloses the increased in the size of the outer diameter but is silent with respect to the outer diameter dimension of 7 to 13 inches. Sewell, Sr. '862 discloses various filtering devices are designed to remove constituents from various

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combustion engines (Col. 1, lines 5-25). It would have been an obvious matter of design choice in view of Sewell, Sr. '862 to one having ordinary skill in the art to design various filtering devices with various outer diameters including the claimed outer diameter to accommodate various engines sizes.

3. Claims 5-15 and 18-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Sewell, Sr. '862 in view of Potts et al. (6,877,780). Regarding claims 5-15, Sewell, Sr. discloses the claimed invention except a inlet and central bodies are mated and sealed to each other along the an axially extending first annulus and said central and outlet cylindrical bodies are mated and sealed to each other along a second axially extending annulus. Potts et al. '780 teaches the connection of tubular bodies such as vehicle exhaust system components (Abstract) with axially extending annulus [Figure 19, (272)] to facilitate in interlocking the tubular bodies with members in axial sliding telescoped relation and the cylindrical bodies are fastened by claming means (120, 190) as shown in Figures 15-18 and Col. 8, lines 30-43). It would have been obvious in view of Potts et al. to one having ordinary skill in the art to modify the connection junctions (14, 16) of the device of Sewell, Sr. with axially extending annulus as taught by Potts et al. to provide an alternative means for interlocking the inlet and central cylindrical bodies and central and outlet cylindrical bodies. With respect to claims 6 and 7, Potts shows protrusion ribs or rigidizing beads located upstream and downstream of annulus and the protrusion ribs are non-overlapped as shown in Figure 19. Regarding claims 9 and 10, Potts et al. illustrates a single tubular connection with upstream raised annular ribs of

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increased radial height and downstream raised annular ribs of increased radial height and the modification of the junctions (14, 16) of Sewell, Sr. with the raised ribs of increased radial height as taught by Potts et. al. obviously has a first, second, third, fourth, fifth, sixth, seventh, and eighth raised annular ribs or raised shoulders with increased first, second, third, fourth, fifth, sixth, seventh, and eighth increased radial height. With respect to claims 10-14, Potts shows ribs upstream and downstream near the overlapped junction has a greater radial height than ribs located further away from the junction and the ribs near overlapped junction are substantially equal in radial heights and ribs located further away from the junction are substantially equal in radial heights. With respect to claim 15, it conventional to provide a central section with a plurality of cylindrical bodies and it would have been obvious to do so here to provide different cylindrical bodies to purifying or remove different constituents from the exhaust stream, such a section body for removing NO<sub>x</sub>, a section body for removing CO<sub>x</sub>, section body for removing hydrocarbon, and etc. Claims 18-22 recite limitations similar to claims 1-15; thus, claims 18-22 are rejected for the same reasons as applied to claims 1-15, above.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-15 and 18-22 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong  
April 12, 2006

TD

  
Glenn Caldarola  
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